

West Nile virus and other arboviral activity: Weekly Summary, Michigan 2013

December 2 (Final), 2013



23

Mosquito pools testing positive for West Nile virus infection in 2013. In total, 4579 mosquito pools were tested for arboviruses in 2013.

38

Number of human West Nile virus infections reported in Michigan for 2013.

46

States reporting West Nile virus human cases in 2013. As of November 19, 2271 cases and 100 deaths have been reported in the U.S. There have also been 403 viremic blood donors detected nationwide.

This update includes provisional data reported to the Michigan Department of Community Health for January 01 – December 2, 2013 for notifiable arboviral disease caused by West Nile, Eastern equine encephalitis, La Crosse, Powassan, and St. Louis encephalitis viruses.

West Nile virus (WNV) activity in 2013

Reported WNV disease cases: As of December 2, 2013, there have been **36 human cases of WNV disease** reported from 11 Michigan counties. Of these cases, 25 (69%) were classified as neuroinvasive disease (e.g., meningitis, encephalitis, acute flaccid paralysis) and 11 (31%) as non-neuroinvasive disease (Table 1). To date there has been **two fatalities** among reported cases of WNV in Michigan. Dates of illness onset for disease range from June 27– October 15, 2013.

Presumptive viremic blood donors: **Four WNV presumptive viremic blood donors** have been reported (Table 1) with donation dates ranging from August 20 to October 6. Two of these donors subsequently became ill with WNV. Most people who are infected with WNV do not develop an illness, but virus might be temporarily present in their blood. These asymptomatic but infected people are detected through routine blood donor screening, which provides an important early warning of WNV activity in an area.

Ecological Surveillance: A young dog from Livingston County with onset of neurologic signs on Nov. 5 was recently diagnosed with WNV infection. Three horses (Allegan, Kent and Ingham counties) were diagnosed with WNV infection in 2013. Mosquito pools have tested positive for WNV infection from Bay, Kent, Midland, Saginaw, and Tuscola Counties. Other ecologic indicators include 43 crows & blue jays, and 18 other avian species testing positive for WNV. Human and ecologic surveillance results are shown in Figures 2 and 3 on the next page.

Eastern Equine Encephalitis (EEE) activity in 2013

A 12-year old, unvaccinated mare from Van Buren county tested positive for Eastern Equine Encephalitis (EEE) virus. The animal fell ill with neurologic signs in early August and subsequently died. EEE is transmitted by mosquitoes and is also a risk to people. A vaccine against EEE is available for horses and is recommended in Michigan.



Table 1. Human West Nile virus infections reported in Michigan, 2013, by county and reported clinical syndrome.

County	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases	Deaths	Presumptive viremic blood donors
City of Detroit	7	0	7	1	1
Delta	0	1	1	0	0
Isabella	0	1	1	0	0
Lenawee	1	0	1	0	0
Macomb	1	2	3	0	1
Midland	1	0	1	0	0
Monroe	2	2	4	0	1
Oakland	4	0	4	0	0
Ottawa	0	1	1	0	0
St. Joseph	1	2	3	0	0
Washtenaw	1	0	1	0	0
Wayne	7	2	9	1	1
Totals	25	11	36	2	4

West Nile virus human disease cases by week of onset, Michigan, 2013 (as of 12/02/2013)

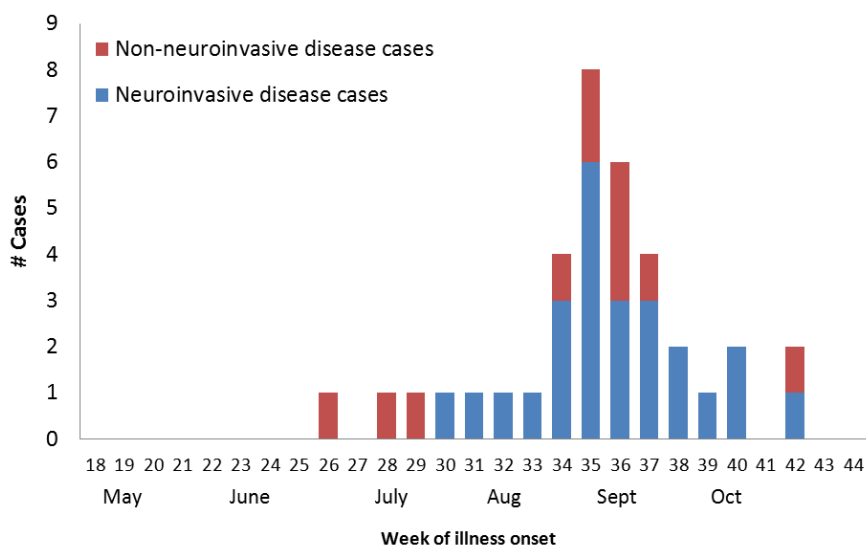


Figure 1 (left). Illness onset of WNV human illness cases in Michigan, 2013.

Figure 2 (below left). Reported WNV human illnesses or presumptive viremic blood donors in Michigan, 2013, by county of residence.

Figure 3 (below right). Reported mosquito, domestic animal, and wildlife species testing positive for WNV in Michigan, 2013.

Figure 2. West Nile virus (WNV) human cases reported in Michigan, 2013 (as of December 2, 2013)

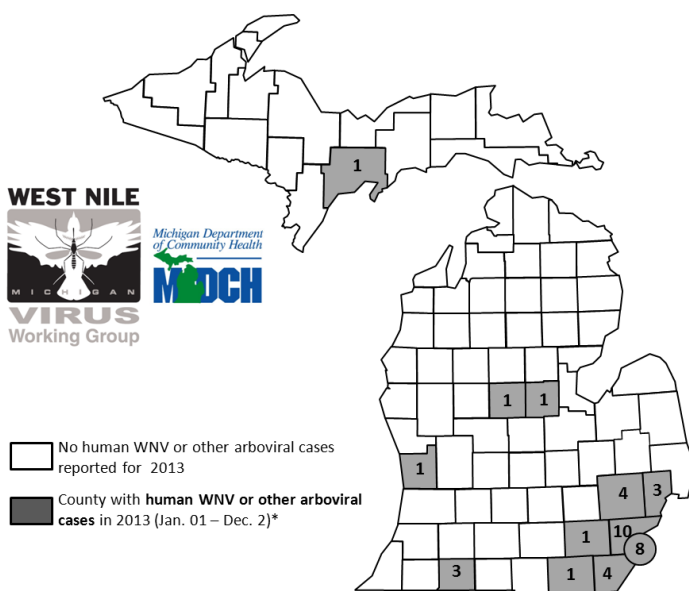
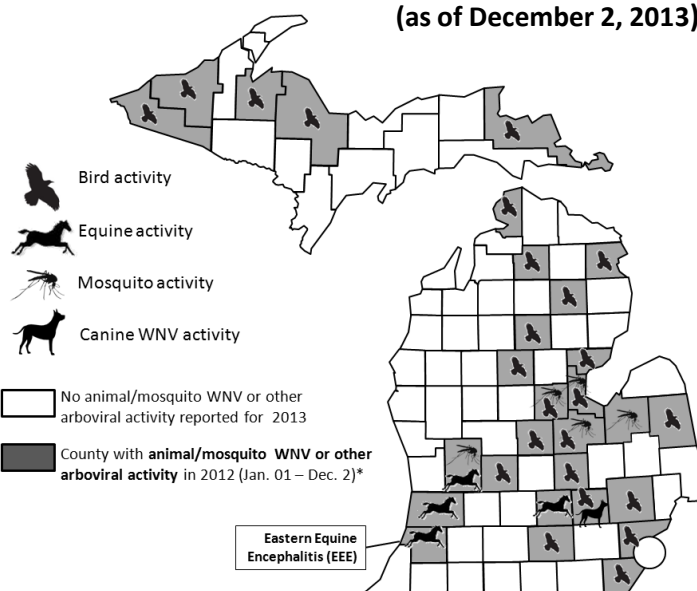


Figure 3. West Nile virus (WNV) and other arboviral ecologic activity reported in Michigan, 2013 (as of December 2, 2013)



What Can Be Done?

Public Health Agencies can

- Monitor Michigan's mosquito populations
- Maintain a surveillance system for arboviral diseases
- Make Michigan data publicly available
- Promote arbovirus disease prevention guidance

Health Providers can

- Review public health data regarding the risk of arboviruses in Michigan
- Diagnose and treat infections using best practices
- Report cases promptly to your local health department
- Remind patients about the risk of arbovirus infection in your area and ways to prevent infections

Everyone can

- **Inform** yourself about where risk for contracting arboviruses is greatest (lack of reported activity ≠ lack of risk however)
- **Inform** yourself about when the risk for contracting arboviruses is greatest:
 - Summer
 - At dusk and dawn, mosquitoes are most active
 - Adults > 50 years of age are more susceptible to serious illness from WNV
 - Children < 15 years of age are more susceptible to serious illness from EEE and La Crosse encephalitis virus.
- **Eliminate** standing water where mosquitos can lay eggs
- **Report** dead birds to your local authorities
- **Protect.** Take precautions to prevent mosquito bites when engaging in outdoor activities

Need West Nile Virus Pamphlets?

The "Fight the Bite" educational pamphlet is a full-color, tri-fold pamphlet which outlines:

- West Nile risk groups (those age 50 and older)
- West Nile symptoms
- Personal protective measures
- Reducing mosquito breeding sites

[Direct pamphlet link](#)

[Spanish language flyer link](#)

If your jurisdiction is interested in receiving pamphlets, please fill out the [electronic order form](#). There is currently a 5,000 pamphlet order limit.

MDCH West Nile Virus Website:

<http://www.michigan.gov/emergingdiseases>

Centers for Disease Control and Prevention West Nile Virus Website:

<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>



Tres Maneras De Reducir El Riesgo De Contraer El Virus Del Nilo Occidental...

